



# PE LOEs & Metrics

*APR 2019*

*RDML F.R. Luchtman, PEAT Lead*

DISTRIBUTION STATEMENT E: Distribution authorized to DoD Components only, Operational Use, 12 April 2018. Other requests shall be referred to NAVAIRSYSCOM 00, 47123 Buse Road, Patuxent River, MD 20670



# PE LOEs & Metrics

## Lines of Effort (RCCA Driven)

### Optimize the Machine

AFB 822 ECS Reset  
 AFB 832 ECS Reset  
 ECP 1233 CXAS Removal  
 ECP 6488 SBAR  
 ECP 6506 CPOMS  
 ECP 6519 LSSI  
 HhART  
 ECP 6477 PBAR  
 ECP 6487 Item 51/26  
 ECP 6481 Ph 2 ECS s/w  
 ECP 6500 ECS Heater  
 AFB 821 ECS Reset  
 IAFC 676 CXAS Disable  
 AFB 814 SRC/Life Limits  
 ECP 6481 Ph 1 ECS s/w  
 AFB 815 SRC/Life Limits

In Work  
 Implemented / IOC

### Protect & Prevent

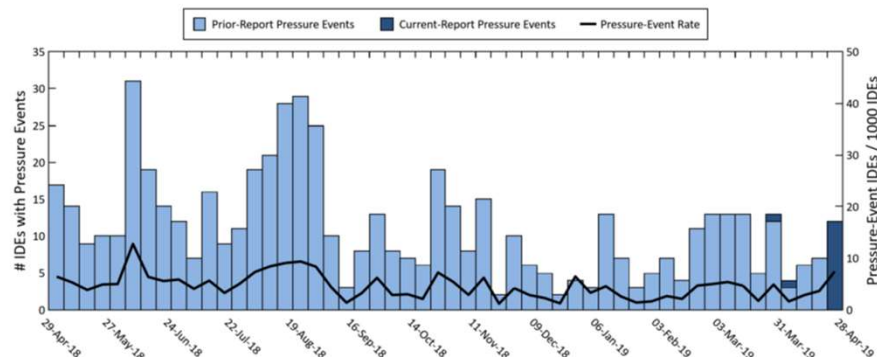
NAMRU-D Study  
 Gear Fit Training  
 Flight Gear Check  
 Chronic Care  
 Provider Education  
 Physiologist Syllabus  
 PE Reporting  
 Acute Care  
 Flight Surgeon Syllabus

### Inform the Aviator

NATOPS  
 PEAT Roadshow  
 CPOMS  
 Physio Monitor  
 Garmin Alert

## Metrics

### F/A-18 / EA-18G Weekly NATOPS Cabin Pressure Event Summary



### F/A-18 / EA-18G RCCA Closures

60% of 615



### T-45 RCCA Closures

93% of 352



■ Closed 
 ■ Open

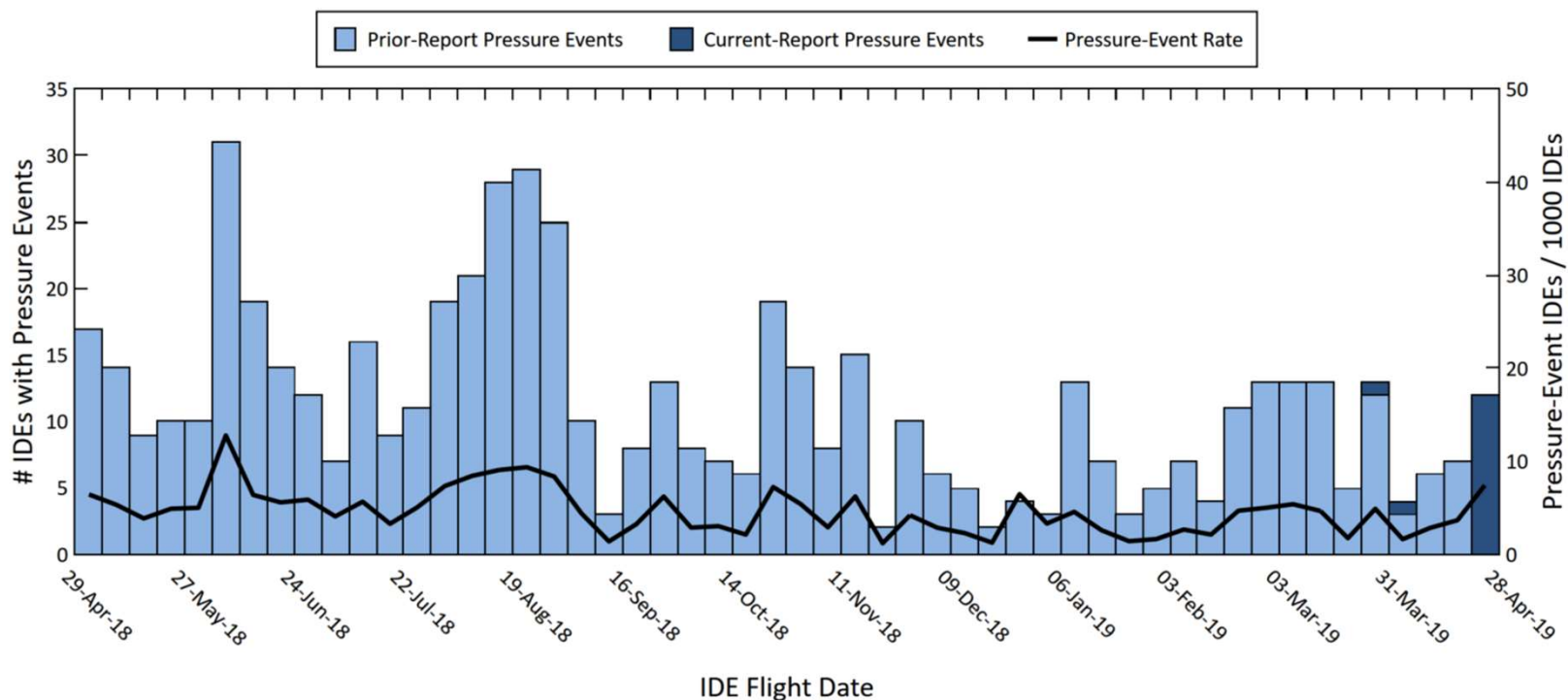
### Future Metrics:

1. PE Aviator Flight Status
2. OBOGS Performance



## F/A-18 & EA-18G Weekly NATOPS Cabin Pressure Event Summary v2.1

- Pressure-Event IDE History shows weekly counts and rates of occurrence of Pressure-Event IDEs in the NATOPS Pressure Report over the past year.
- TMS is determined from BUNO parsed from IDE file name. "All Files" figure contains all data, including those with unknown TMS.
- "IDE Flight Date" is the date represented in IDE time data. This data is known to contain occasional errors.
- "Current-Report Pressure Events" were uploaded in this file upload period. "Prior Report Pressure Events" are historical data.
- "Pressure-Event Rate" is calculated with respect to all IDEs meeting the criteria for inclusion in the report.



- A single NATOPS cabin pressure event is defined as multiple pressure fluctuations within a single Slam Stick file (IDE). A pressure fluctuation is identified as a peak-to-peak change in cabin altitude meeting three criteria:
  1. Peak-to-peak magnitude change of cabin altitude > 2000 feet
  2. Average cabin pressure rate-of-change > 0.2 psi/second
  3. Duration < 15 seconds



# LOE: Optimize the Machine

TMS	Component	Assoc PEs	TGT	IN/OUT FLOW	IOC
T-45C	Straight Pipe	UNK	AOS	BOTH	FY18
T-45C	Flight Idle Increase	UNK	AOS	BOTH	FY18
T-45C	ABOS	UNK	AOS	N/A	FY20
T-45C	GGU-25	N/A	AOS	N/A	TBD
F/A-18 A-D	AFB 821 ECS Reset	SYS	REL	BOTH	JUN 17
F/A-18 A-D	AFB 822 ECS Reset	SYS	REL	BOTH	FY19
F/A-18 A-D	AFB 832 ECS Reset	SYS	REL	BOTH	FY19
F/A-18 A-D	IAFC 676 CXAS Disable	SYS	STBL	OUT	APR 17
F/A-18 A-D	AFB 814 SRC Inspection/Life Limits	SYS	REL	BOTH	FEB 17
F/A-18 A-D	AFB 824 Check Valve Inspection	SYS	STBL	OUT	CY20
F/A-18 A-D	AFB 813 Check Valve Inspection	SYS	STBL	IN	CY20
F/A-18 A-D	ECP 1233 CXAS Removal	14	STBL	OUT	NOV 19
F/A-18 A-G	ECP 6488 SBAR	34	REL	IN	CY20
F/A-18 A-G	ECP 6506 CPOMS	MAR	AOS	N/A	AUG 19
F/A-18 A-G	ECP 6519 LSSI	MAR	AOS	N/A	CY21
F/A-18 A-G	HhART	SYS	REL	BOTH	CY20
F/A-18 A-G	NATOPS Changes (Multiple)	MAR	STBL	BOTH	CY19
F/A-18 A-G	IETMS Changes (Multiple)	MAR	STBL	BOTH	CY19
F/A-18 A-G	ATP Rework (Multiple)	MAR	STBL	BOTH	CY21
F/A-18 E-G	ECP 6477 PBAR	16	REL	IN	SEP 19
F/A-18 E-G	ECP 6478 Item 51/26 Add Heat Valve	10	REL	IN	SEP 19
F/A-18 E-G	ECP 6481 PH 1 ECS S/W	20	STBL	IN	MAR 18
F/A-18 E-G	ECP 6481 PH 2 ECS S/W	24	STBL	BOTH	APR 20
F/A-18 E-G	ECP 6500 ECS Heater Element	20	STBL	IN	TBD
F/A-18 E-G	ECP XXX Bleed System Pressure Sensor	26	STBL	IN	TBD
F/A-18 E-G	ECP6474 BALD Re-route	4	STBL	IN	FY16
F/A-18 E-G	AFB 815 SRC Card Inspection/Life Limits	SYS	STBL	BOTH	FEB 17
F/A-18 E-G	AFB 825 Check Valve Inspection	SYS	STBL	OUT	CY20

**SYS - System Improvement, MAR - Margin Improvement, # - Linked PEs, REL - Reliability Improvement, STBL - Stability Improvement**

There is no singular root cause of PE (i.e., no "smoking gun")

Physiological Events happen when components fail. There is no intrinsic design flaw.

Current efforts are focused on improving component reliability which will reduce instances of cockpit pressure exceedances

In Work  
Implemented / IOC